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OF PLANT PROTECTION

1936 No. 3

## DISCOVERIES AND CURRENT EVENTS *

### England and Wales: New and Interesting Phytopathological Records for the Year 1935 †

A. Plant parasitic fungi encountered in England and Wales during 1935 and believed not to have been found there previously:—

*Cercosporella herpotrichoides* Fron, on wheat.
*Gibellina cerealis* Pass., on wheat.

B. The parasites mentioned below are not new to England and Wales, but their occurrence on the hosts mentioned does not appear to have been recorded there previously:—

*Penicillium Gladioli* McCulloch and Thom, on montbretia.
*Oidium* sp., on sugar beet.
*Ophiobolus herpotrichus* (Fr.) Sacc., on wheat.
*Phytophthora parasitica* Dastur, on gloxinia.
*Rosellinia necatrix* (Hart.) Berl., on *Cyclamen neapolitanum* and *Viola odorata.*
*Sclerotinia sclerotiorum* (Lib.) de Bary, on hop.
*Sclerotinia Trifoliorum* Erikss., on vetches.
*Armillaria mellea* (Vahl) Fr., on hop, *Andromeda* sp. and *Ceanothus* sp.

C. Injurious insects found in 1935 and not previously recorded in England and Wales:—

*Platyparea poeciloptera* Schrk., on asparagus.
*Hoplocampa brevis* Klug, on pear.
*Parlatoria flugeae* Hall, on myrtle.

D. The pests mentioned below are not new, but their attack on the hosts mentioned does not appear to have been noted previously in England and Wales:—

*Pseudococcus* (*Trionymus*) *peregrinus* Green, on amaryllis.
*Anguillulina dipsaci* Kühn, on parsnip.

E. Colorado Beetle. The districts around Tilbury and Gravesend previously infested by the Colorado Beetle (*Leptinotarsa decemlineata*) have

* Under this and the next heading the countries are arranged in French alphabetical order.

† Communication from the Ministry of Agriculture and Fisheries, London, official correspondent of the Institute.

been kept under a continuous watch during 1935, but no traces of the pest have been detected. It would appear, therefore, that the campaign of eradication carried out by the Ministry of Agriculture has been successful.

### Angola: Locust Movements (*Nomadacris septemfasciata* and *Locusta migratoria migratorioides*) *

During the months of July, August and September, 1935, invasions and movements of locusts have been reported in various parts of the Colony, although, generally speaking, it may be said that locust movements have been less important in this period than in the same period last year.

Locust control has been carried out in all districts, the results, which refer to the three months mentioned above, are shown in the following Table: —

| Provinces | Hoppers destroyed | | Adults destroyed (Kilograms) |
|---|---|---|---|
| | Bands | Kilograms | |
| Luanda | 546 | 34.040 | 72.927 |
| Malange | — | — | 4.000 |
| Benguela | — | — | — |
| Huila | — | — | 102.000 |
| Bié | — | — | — |
| Total | 546 | 34.040 | 178.927 |

Although during the month of July, 1935, the presence of locusts has been reported in various parts of the Colony, the general situation is fairly favourable and, compared with the observations made in the corresponding month of 1934, is very satisfactory.

During the month of August, 1935, few locusts have been observed in the North, South and extreme East of the Colony, while in the coastal zone the locust movements have been of greater importance. No locust diseases or pests have been observed. The damage caused has been of no great importance. The outlook is very much brighter. During this month the situation has greatly improved in comparison with the same epoch, 1934.

During the month of September, 1935, a few swarms have continued to infest the Colony, principally in the North and East. The situation compared to the previous month, may be said to be stationary or in some cases even better as the invasions in the South have not been repeated. Information is not available on the hatching. All this shows that the next outbreak will be considerably reduced compared to that of last year.

* Communication from Mr. Jorge de Barros Rodrigues Queiroz, Agronomical 'Ingénieur', Director of the Laboratory of Plant Pathology and Agricultural Entomology, Luanda, Technical Adviser to the Locust Control Service, transmitted to the International Institute of Agriculture by the Government General of the Colony.

## Cyrenaica: Entomological Records *

*Schistocerca gregaria*, Forsk. While travelling through the region of the eastern Sirte, for the locust control, during the spring and autumn of 1935, I observed everywhere the disappearance of the solitary phase of the desert locust and intermediary forms which were very frequent in all parts of Cyrenaica during past years.

*Dociostaurus maroccanus*, Thnb. After several years new swarms of Moroccan locusts have appeared in the neighbourhood of Cyrene. These swarms have been destroyed with poisoned baits.

*Calliptamus italicus*, L. associated with *Oedaleus nigrofasciatus*, De Geer and other Acrididae, has been controlled, from the end of May to mid-July, 1935, on the eastern Djebel, with poisoned baits.

*Chlorita libyca*, de Berg. (syn. *Empoasca benedettoi*, Paoli). From mid-June until the end of August, 1935, this parasite of the vine has been controlled with emulsions of soap and tobacco juice. The control will be started again at the end of the winter after the vines have been pruned, as *Chlor. libyca* hibernates in the adult stage (on 29 December, 1935, numerous individuals were found on the vines).

*Psyllidae*. At the beginning of August, 1935, the leaves of numerous peach trees of Barce (El Merg) were of an opaque green colour, rolled up, wilted and swollen on the upper surface, while part of the fruits, still green, had fallen and presented numerous small punctures through which issued gummy humours. Nothing else was to be seen with the naked eye. Following a second examination, that I made at twilight, I was surprised to find that, when gently tapping the branches of one of the most withered trees, a great quantity of small and very active insects belonging to *Psyllidae* family fell into a white umberella which I had placed under the tree. I suspend exact identification of the insect until further investigations and studies have been made.

## Southern Rhodesia: Locust Invasion, 1932-1935 †

### Monthly Report No. 36. November, 1935.

Swarms of the Red Locust (*Nomadacris septemfasciata*, Serv.) have been reported from the following districts during the month, namely: Charter, Hartley, Nyamandhlovu, Makoni, Bikita, Melsetter, Victoria, Umtali, Gwanda, Bulawayo, Ndanga, Bulalim-Mangwe, Matobo, Chibi and Darwin.

Most of the swarms have been described as large, some as ' exceptionally large '.

* Communication from the official correspondent of the Institute, Mr. Giorgio Kruger, Entomologist to the Agricultural Services of Cyrenaica, Bengazi.

† Communication form the official correspondent of the Institute, Mr. Rupert W. Jack, F. E. S., Chief Entomologist, Agricultural Laboratory, Department of Agriculture, Salisbury, Southern Rhodesia.

In conformity with previous experience the relatively humid Melsetter district on the eastern border has been haunted by numerous swarms crossing to and from Portuguese East Africa.

Considerable damage to young grass and early grain is reported.

No reports have been received of egg-laying, which commenced during the last week of November last year. Specimens forwarded to Salisbury had not shown full development of ovaries by the end of the month and the breeding colouration of the insects has not as yet become very marked.

No disease or parasite attack has as yet been demonstrated, but storks and hawks have been reported attacking the swarms in various parts of the Colony. The white stork (*Ciconia alba*) has apparently been more in evidence than for some years past.

The lack of general rains during November may be regarded as favourable to the locusts, which may lay eggs before disease brings a marked reduction in numbers.

At the same time, the number of locusts in the Colony amounts to only a small fraction of the number present at the end of November last year.

## LEGISLATIVE AND ADMINISTRATIVE MEASURES

**Algeria.** — By Ordinance of the Governor General, dated 14 August, 1935, new regulations have been established for the importation of potatoes, tomatoes and aubergines grown in France. (*Deutsches Handels-Archiv*, Berlin 1935, 89. Jahrg., 1. Dezemberheft, S. 3821).

**Germany.** — A Decree of 27 November, 1935, gives a complete list of custom-houses authorised to import plants, shrubs and plants other than grape vines. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Februar 1936, Bd. VIII, Nr. 1, S. 14-16).

*** By Notification of 10 December, 1935, modifying the measures to be taken for the prevention of the introduction of San José scale [*Aspidiotus perniciosus*], it is permitted to import dried nuts by any custom-house provided that the importation is effected by post and that the nuts are sent as a present and are intended to be consumed by the consignee. (*Ibid.*, S. 2).

**Germany (Prussia).** — By Ordinance of 27 November, 1935, the control of voles [*Arvicola*] is made compulsory in the province of Westphalia. The local police authorities will fix, in agreement with the central plant protection Service, the period during which the control should be carried out and the means which should be employed. (*Amtliche Pflanbenschutzbestimmungen*, Berlin, 1, Februar 1936, Bd. VIII, Nr. 1, S. 20).

**Argentine Republic.** — By Decree No. 66.299 of 2 September, 1935, the insect known as ' cochinilla blanca ' (*Chionaspis citri*, Comst.) is declared a pest of agriculture.

The ' Dirección de Sanidad Vegetal ' will take the measures necessary for the control of this pest. (*Boletín Oficial de la República Argentina*, Buenos Aires, 14 de diciembre de 1935, año XLIII, núm. 12.442, pág. 488).

*** The Decree No. 72.237 of 6 December, 1935, establishes that as from the 10th of the same month the importation of lead arsenite, for use in the control of plant pests, will be permitted free of customs duties, in accordance with the provisions of the said Decree. (*Ibid.*, 11 de diciembre de 1935, núm. 12.439, pág. 353).

**Austria.** — By Decree No. 483 in force on 1 January, 1936, the Decree No. 222 of 18 July, 1932 [see this *Bulletin*, 1932, No. 11, pp. 182-184], concerning the prevention of the introduction of diseases and pests injurious to plants, has been modified in respect of the measures concerning the Colorado beetle (*Leptinotarsa decemlineata*).

The importation and transit of fresh potatoes, plants or parts of plants with roots or lumps of earth, bulbs, turnips, rhizomes, tubers, tomatoes, aubergines and strawberries originating from countries infested or threatened with the infestation of Colorado beetle, are forbidden.

The importation and transit of other species of vegetables and kitchen-garden plants originating from these countries will be limited to the period from 15 November to 14 March.

The importation and transit of the above mentioned products originating from uninfested countries, but passing through a country infested or threatened with the infestation of Colorado beetle, are not permitted unless their origin is certified by a transport pass or a document issued by the Plant Protection Service of the country of origin of a customs-house authority of the railway or port. In addition, the despatch of consignments will be limited to the period from 15 November to 14 March.

The following countries are at present considered as being infested by the Colorado beetle:— the United States of America, Canada, Belgium, France, with the exception of Corsica and the French departments overseas. (*Bundesgesetzblatt für den Bundesstaat Österreich*, Wien, 19. Dezember 1935, Jahrg. 1935, 131. Stück, S. 1794-1795).

*** By Decree No. 484 in force on 1 January, 1936, the Decree No. 25 of 9 January, 1930 [see this *Bulletin*, 1930, No. 6, pp. 87-89], concerning the importation and transit of potatoes and other products which may carry wart disease (*Synchytrium endobioticum*), has been modified.

The importation of fresh potatoes, originating from countries not free from wart disease, is forbidden unless they are intended for planting purposes; this importation is authorised only for the quantity of potatoes for planting which are required by the country. The importation should take place by railway. The consignments should be accompanied by a health and provenance certificate and a special permit issued by the Ministry of Agriculture and Forests. The importers making application for such permits should indicate the variety, quan-

tity, origin and address of the supplier of the potatoes for planting which they wish to import. The Ministry of Agriculture and Forests may later apply special measures for protection. (*Ibid.*, S. 1795-1796).

**Belgium.** — The Royal Decree of 23 August, 1935, regulating the trade in seeds, plants, fertilisers and forage contains various provisions of a phytosanitary nature.

The seeds sold for sowing should not contain more than 4 % of weed seeds such as wild carrot (*Daucus carota*), common chamomile (*Matricaria chamomilla*), wild and white mustards (*Sinapis arvensis* and *S. alba*), charlock (*Raphanus raphanistrum*), sorrel (*Rumex*), plantains (*Plantago*), etc.

It is forbidden to sell seeds of white clover, bastard clover, birds foot trefoil and timothy grass if they contain more than one seed of dodder per 50 grammes and seeds of red clover, crimson clover, lucerne, nonesuch, kidney vetch and flax if they contain more than one grain of dodder per 100 grammes.

Forage sold on the market should not show traces of smut and bunt if these cannot be removed by modern cleaning machines.

The provisions for the application of this Decree include a Table of cereals, field grasses, leguminous plants, forage plants, industrial and horticultural plants and forest trees indicating for each species the cleanliness and germination power to be required. (*Deutsches Handels-Archiv*, Berlin 1935, 89. Jahrg., 2. Dezemberheft, S. 3993-4001).

**Brazil.** — By ' Portaria ' of 12 September, 1935, the following has been established:—

(1) The phytosanitary inspection of crops will be undertaken by the ' Servicio de Defesa Sanitaria Vegetal ' which will deliver the sanitary certificate of origin.

(2) The control of the harvest, packing, embarkation and stowing on board will be encumbant on the ' Servicio de Fruticultura' also the deliverance of technico-commercial and health certificates of the consignments of fruit embarked.

(3) The ' Servicio de Fruticultura' will only permit the picking of fruit intended for export in the orchards which hold a sanitary certificate issued by the ' Servicio de Defesa Sanitaria Vegetal' stating that these orchards are in good condition.

(4) In the ports and railway stations, where there is not much traffic and where there is no permanent technician of the ' Servicio de Fruticultura ', the control and deliverance of certificates will be entrusted to a technician of the ' Servicio de Defesa Sanitaria Vegetal ' or another Service of the ' Departamento Nacional de Producción Vegetal ' with head-quarters at the place of embarkation or in the vicinity of same.

(5) The ' Servicio de Defesa Sanitaria Vegetal ' will immediately communicate to the ' Servicio de Fruticultura ' the orchards the products of which may not be exported and the reason for this prohibition.

(6) All prescriptions on the sanitary treatment made by the ' Servicio de Defesa Sanitaria Vegetal ' for fruit-growers, will be communicated to the ' Servicio de Fruticultura ' so that this Service may collaborate in the carrying out of same. (*Boletim do Ministerio da Agricultura*, Rio de Janeiro, julho-setembro 1935, anno 24, num. 7-9, pags. 228-229).

**Cyprus.** — The Agricultural Produce (Potato) Export Regulations, 1935, dated 20 August, 1935 establish, *inter alia*, that no potatoes shall be passed as fit for export if such potatoes:—

(*a*) Are infested with Tuber Moth (*Phthorimaea operculella*).

(*b*) Are attacked by such other pests or diseases as may be scheduled by notice in the *Cyprus Gazette* from time to time.

(*c*) Contain more than 10 per cent. of the number of tubers which in the opinion of the Produce Inspector are not likely to arrive at the destination to which they are consigned in marketable condition.

(*d*) Contain more than 1 per cent. of soil or other foreign matter.

A form of Produce Inspection Certificate is appended. This states that the following pests and disease do not occur in Cyprus: — *Phylloxera vastatrix, Doryphora* [*Leptinotarsa*] *decemlineata, Epitrix cucumeris, Synchytrium endobioticum* and that the consignment is passed for export in the belief that it is free from *Phthor. operculella*. (*The Cyprus Gazette*, Nicosia, 23rd August, 1935, No. 2461, pp. 580-581).

**Belgian Congo.** — The existence of banana weevil having been determined in the region of Coquilhatville and Eala, the Decree No. 129/Agri. of the Commissioner of the Province of Coquilhatville, dated 21 September, 1935, establishes the following:—

Article 1 of the Ordinance of 14 January, 1927, of the Governor of the Province of Equator [see this *Bulletin*, 1927, No. 9, p. 145] is replaced by the following text: —

' Are declared infested by the banana weevil (*Cosmopolites sordidus*) the region comprised with in a radius of 5 km. around the urban centre of Libenge and that comprised within a radius of 15 around the urban circumscription of Coquilhatville '. (*Bulletin Administratif du Congo Belge*, Léopoldville-Kalina, 25 octobre 1935, 24ème année, nº 20, p. 715-716).

**Spain.** — By Decree of 4 October, 1935, regulations are established for the export of oranges and other citrus fruits. (*Gaceta de Madrid*, 6 octubre 1935, año CCLXXIV, tomo IV, núm. 279, págs. 126 a 133).

*** By Decree of 9 November, 1935, the application is suspended of the above mentioned Decree until the ' Junta Nacional Naranjera ', when organised, and within the space of 8 days following its constitution, informs the Ministry of Agriculture, Industry and Commerce concerning the advisability of maintaining, modifying or annulling the regulations of the Decree of 4 October, 1935.

It is also established that the Services of Phytopathological Inspection and those for the Inspection, Supervision and Regulation of Exports (' Soivre ') are united in a single organisation for inspection in conformity with the rules laid down by the said Ministry. (*Ibid.*, 14 noviembre 1935, núm. 318, pág. 1262).

*** By ' Orden ' of 9 November, 1935, it is established that until the ' Junta Nacional Naranjera ' issues the report refered to by the Decree of the same date mentioned above, the inspection of oranges will be confined to inspection of a phytopathological nature when the oranges are for export to countries where, according to treaties with the Republic, such inspection is required. (*Ibid.*, pág. 1269).

*** By ' Orden ' of 13 November, 1935, a Commission is nominated for drawing up the regulations for joint activities of the Services of Phytopathological Inspection and the Official Service of Inspection, Supervision and Regulation of Exportation of citrus fruits. (*Ibid.*, 16 noviembre 1935, núm. 320, págs. 1331 y 1332).

**Estonia.** — The Decree of 9 September, 1935, on the protection of plants puts under the supervision of the Phytopathological Service all plants growing in gardens, fields, meadows and grass land, also in forests, and all products of the soil and forests including warehousing localities.

Holders of land are obliged to immediately declare the presence of all diseases and pests of plants which will be declared dangerous by the Ministry of Agriculture, which is authorised:—

(*a*) to make the control of certain diseases and pests compulsory;

(*b*) to declare certain demarcated regions to be infested;

(*c*) to subject nurseries, horticultural undertakings, etc., to a special sanitary inspection;

(*d*) to subject to special control certain plants and vegetable products or to forbid completely their cultivation;

(*e*) to instruct persons interested to carry out the control in common and according to the established rules;

(*f*) to effect the supervision of the manufacture and trade in remedies.

The costs of control are charged to those interested. The costs of control in common will be divided among those interested according to the rules which will be established by the Ministry of Agriculture.

Persons obliged to destroy their plants, plant products, etc., will be indemnified by the State. No indemnity will be paid in cases of importation from abroad. (*Deutsches Handels-Archiv*, Berlin 1935, 89. Jahrg., 2. Dezemberheft, S. 4004-4005).

**Finland.** — By Ministerial Decree No. 282 of 27 September, 1935 with a view to preventing the introduction of potato diseases and pests, the importation and transit of potatoes are subject to the following conditions. Transport should be effected in sacks, baskets or new cases each of which should bear the seal of the Phytopathological Service of the exporting country. The

consignment should be accompanied by a certificate of the said Service attesting, *inter alia*, that the potatoes are free from wart disease (*Synchytrium endobioticum*) and that the place where the potatoes were grown is 50 and 200 km. distant from all centres of wart disease and Colorado beetle (*Doryphora* [*Leptinotarsa*] *decemlineata*) respectively. The consiguments should not contain more than 5 % of tubers damaged by frost or infested by cryptogamic diseases included dry or wet rot and should enter the country by determined customs posts a list of which is given.

The above mentioned sanitary certificate should be sent by post to the Plant Protection Section of the Agricultural Experiment Station, Tikkurila one week before the expedition of the potatoes.

The Ministerial Decree of 12 November, 1935, is revoked. (*Deutsches Handels-Archiv*, Berlin 1935, 89. Jahrg., 1. Dezemberheft, S. 3802).

**Kenya.** — The Ordinance No. 23 of 1935, dated 23 August, 1935, which may be cited as the Sale of Pyrethrum Ordinance, 1935, regulates the sale and distribution of pyrethrum (*Pyrethrum cinerarifolium* [= *Chrysanthemum cinerariaefolium*]) grown in the Colony. (Colony and Protectorate of Kenya. *Supplement to the Official Gazette. Ordinances* (*No. 3*). *Supplement No. 34*, Nairobi, September 3, 1935, Vol. XXXVII, No. 42, pp. 38-39).

*** The Ordinance No. 33 of 1935, dated 23 August, 1935, which may be cited as the Suppression of Noxions Weeds Ordinance, 1935, provides for the suppression of noxious weeds. (*Ibid.*, pp. 113-115).

**Martinique.** — By Decree of the Governor, dated 28 March, 1935, the Decree of the Minister of Colonies, dated 9 February, 1935, modifying that of 7 December, 1926 [see this *Bulletin*, 1927, No. 2, pp. 23-24, and 1935, No. 6, p. 135], concerning the protection of bananas against Panama disease [*Fusarium cubense*], is promulgated into Martinique. (Ministère des Colonies. Institut National d'Agronomie de la France d'Outre-Mer. *L'Agronomie Coloniale*, Paris, janvier 1936, 25e année, nº 217, p. 21).

**Dominican Republic.** — By Decree No. 1448 of 26 November, 1935, it is forbidden to introduce cotton or cotton seed originating from the Republic of Haiti, unless these imports have previously been authorised by the Ministry of Agriculture and Labour, who will not give this authorisation unless he considers that no risk is entailed of introducing the cotton boll weevil [*Anthonomus grandis*], and that the necessary precautions are taken. (*Revista de Agricultura y Comercio*, Órgano Oficial de la Secretaría de Estado de Agricultura y Trabajo, Santo Domingo, República Dominicana, diciembre de 1935, vol. XXVII, núm. 75, pág. 2170).

**Switzerland.** — By Notification of 29 May, 1935, with a view to preventing the introduction of grape phylloxera [*Phylloxera vastatrix*] the presence of which has been determined in the Vorarlberg, it is forbidden to import

from Austria, grapes, fruit trees, plants of all species and plant products, including compost, etc. (*Deutsches Handels-Archiv*, Berlin 1935, 89, Jahrg., 1. Dezemberheft, S. 3950).

**Czechoslovakia.** — By Decreee of 9 August, 1935, with a view to preventing the introduction of San José scale [*Aspidiotus perniciosus*], it is forbidden to import, from the countries mentioned below, living plants and parts of living plants including fresh fruit, vegetables and whole coco-nuts, also substances which have been in direct contact with these products, and packing material in particular. These countries are as follows: Africa, America, Australia, China, Hawaii, India, Japan, Yugoslavia, New Zealand, Austria, Portugal, Rumania, Spain and Hungary. The Decree does not apply to conifer wood, dried wood without bark of any kind nor to cereal seeds, seeds and fruits without the skin. (*Deutsches Handels-Archiv*, Berlin 1935, 89, Jahrg., 1. Dezemberheft, S. 3982).

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In addition to insects Acarina are treated which attack the pear, apple, date-palm, hazel nut, vine, also worms, molluscs, Acarina and Myriapoda injurious to cereals.
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III. Resistenza del terreno all'attacco fitofago degli insetti.
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V. I lavori al terreno.
VI. Influenza dell acqua e del fuoco.
VII. Concimazioni.
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## NOTES

**Questions of Plant Pathology discussed at VIth Assembly of the International Institute for Beet Research.** — The VIth Assembly of the International Institute for Beet Research (I. I. R. B.), held in Brussels from 6 to 8 January, 1936, decided, *inter alia*, that in the future, the disease previously known as yellowing properly so-called

or ' Vergelings-ziekte ' should be called yellowing disease of beet, the researches made by the Belgian Institute for Beet Improvement, Tirlemont, in collaboration with the Laboratory of Mycology, Wageningen, confirmed by the investigations made by the ' Institut voor Suikerbietenteelt ', Bergen op Zoom, having proved that this disease is a virus disease.

The said Assembly also made the following recommendations:—

That new researches should be undertaken on the action of disinfection and on the stimulation of seeds.

That special attention should be given to the determination of the presence and the action of secondary mineral elements (titanium, rubidium, boron, etc.) in the beet and in the soil, both as regards their action in respect of diseases and their influence on the yield in quantity and quality.

That the study of the different types of beet yellowing and heart rot should be continued.

**XIIIth International Zoological Congress.** — On the suggestion of the Brazilian Government, the town of Rio de Janeiro has been chosen as the seat of the XIIIth International Zoological Congress which will take place in 1939.

**International Competition for the Discovery of a Remedy against Root-Rot of Citrus Trees.** — The ' Camera Agrumaria ' of Messina, Italy, has opened to scientists of all nationalities a competition with a single prize of 50.000 lire, to be awarded to the competitor who discovers a really efficacious method, practical and economical in application, for control of the spreading of and damage caused by root-rot of citrus trees (*Phytophthora* spp.).

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